



Office for
Low Emission
Vehicles

Going Ultra Low – the UK's approach to zero emission vehicles

Bob Moran, Deputy Head

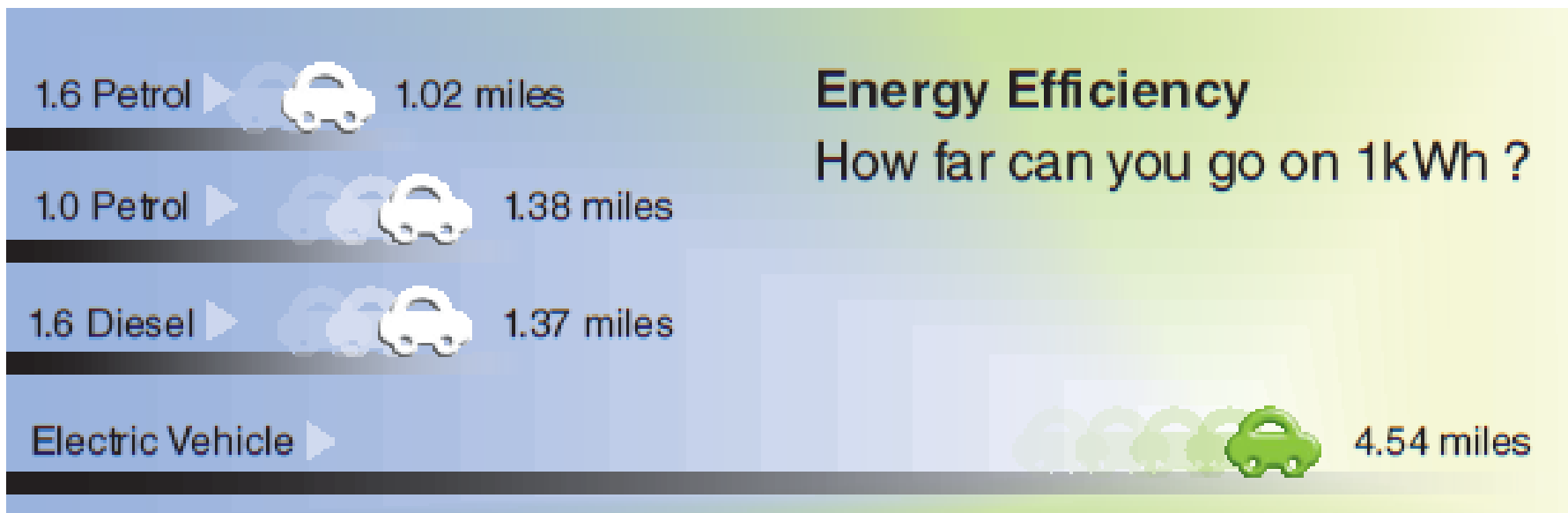


Moving Britain Ahead

October 17



The future of mobility is connected, automated and electric.





Office for
Low Emission
Vehicles

New technologies offer opportunities to improve mobility.





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Low Emission
Vehicles

UK is at the forefront of the global shift to electric vehicles.



Engineering the new I-PACE – JLR's first battery electric vehicle



1 of only 2 global hubs for EV powertrain engineering and development



UK Legislation - 80% reduction in CO₂ emissions by 2050.





2040? UK are setting the global pace of change.



Milk can be branded inhumane, advertising chiefs tell farmers

Ben Webster, *Environment Editor*

Vegan campaigners are free to brand British milk production as inhumane after a ruling by the advertising regulator.

Dairy farmers had argued that an advert labeling "humane milk as a myth — don't buy it" was inaccurate but the Advertising Standards Authority (ASA) will clear it in a ruling to be published today.

The decision is a blow to the dairy industry, which is losing customers as people switch to vegetarian or vegan diets. The regulator says that there are more than 540,000 vegans in Britain, up from 150,000 a decade ago. Hard-hitting billboard campaigns warning against consuming milk, eggs

and meat have become a common sight on high streets.

Go Vegan World, the campaign group that placed the ad with advert in national newspapers in February, said the ruling vindicated its claim that drinking milk involved cruelty to cattle because they were bred and managed to maximize production.

The National Farmers' Union, which made one of seven complaints against the advert, said that it intended to appeal. Michael O'Brien, NFU dairy board chairman, said "I would question the ASA's impartiality. The vegan advert was misleading and our members, who are constantly looking to improve welfare standards, found it upsetting and demoralising."

It is the second time in two months that dairy farmers have lost an ASA case. Last month the regulator handed an advert for organic milk after upholding a complaint that describing it as "good for the land" was misleading.

In the same ruling, the ASA accepted Go Vegan World's claim that calves "are pumped full of antibiotics, found from their mothers when 'fresh from the udder'".

End of the diesel and petrol car

All new vehicles must be fully electric by 2040

Ben Webster, *Environment Editor*

Sales of new diesel and petrol cars and vans will be banned from 2040, the government is to announce today.

The scrapping of new petrol vehicles that have an electric motor and a petrol engine will allow electric cars to take over.

Less than 1 per cent of new cars sold in Britain run only on electric power.

The ban is part of a government plan to improve air quality. It includes £25 million to help local authorities to deal with toxic nitrogen dioxide (NO₂) from diesel vehicles. The decision about electric vehicles came at a meeting in London on Tuesday.

It follows a decision by the Royal College of Physicians last year that air pollution — linked to cancer, asthma, stroke and heart disease, diabetes, obesity and dementia — caused 40,000 premature deaths a year.

The government's commitment to a similar ban is a strengthening of its previous position. The Conservative manifesto stated "We want almost every car and van to be zero-emission by 2040". Two weeks ago the government said that, for the target to be achieved, sales of new petrol and diesel cars would need to stop in 2035.

The air-quality plan announced today is part of a £1 billion programme, of which £2.7 billion has already been revealed including £1 billion in grants.

Continued on page 4, col 1



Charlie Gard set to spend final days in care hospice

Frances Gibb, *Legal Editor*

Charlie Gard is likely to spend his final hours in a hospice unless his parents can find a doctor who will care for the terminally ill baby at their family home.

Constance Yardley and Chris Gard pleaded yesterday for any paediatric intensive care doctor to come forward to help them to have a few days of "tranquillity" with him at home.

Mr Yuse, 35, speaking after a lengthy and had been hearing at the High Court, said "We promised Charlie every day we would take him home. It's been through to deny us this."

The parents' legal team, headed by Lord Carnarvon Street, where Charlie is being treated, of creating "obstacles" to him being taken home to Bedford, west London. The hospital doctors insist that there are no practical barriers, including finding a specialist willing to receive intensive ventilation care in a home setting. The hospital prefers sending the boy to a hospice.

Mr Antonio Francis gave the couple until this afternoon to offer a plan for taking home their 11-month-old baby, who suffers from a rare genetic condition. The judge was minded to accept the request of the hospital, saying "It looks like the chances are small."

A barrister for the guardian appointed by the judge to independently represent Charlie's interests, supported the hospital. The guardian wants to return the baby to a hospice if the parents cannot convince him.

The parents' barrister, Grant Armstrong, said "We struggle with the difficulties which the hospital is placing in the way of Charlie going to a hospice. He is likely to die within hours as they are only able to provide palliative care short term."

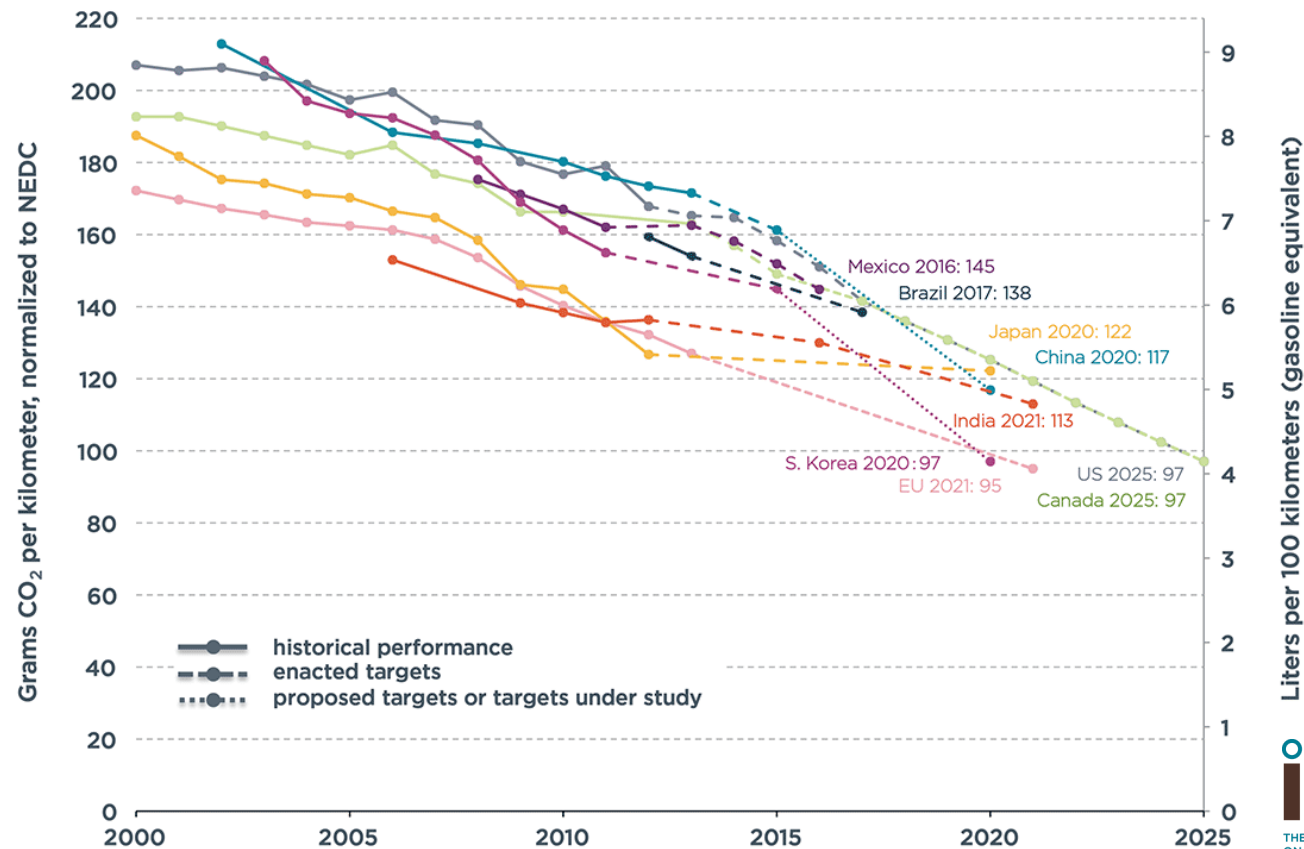
The couple gave up their fight on Monday for permission to take him to the US for therapy, accepting that "time had run out". Charlie's condition has deteriorated to a point where no treatment could help him, the court was told.

Decide under heading page 11
Leading article, page 27



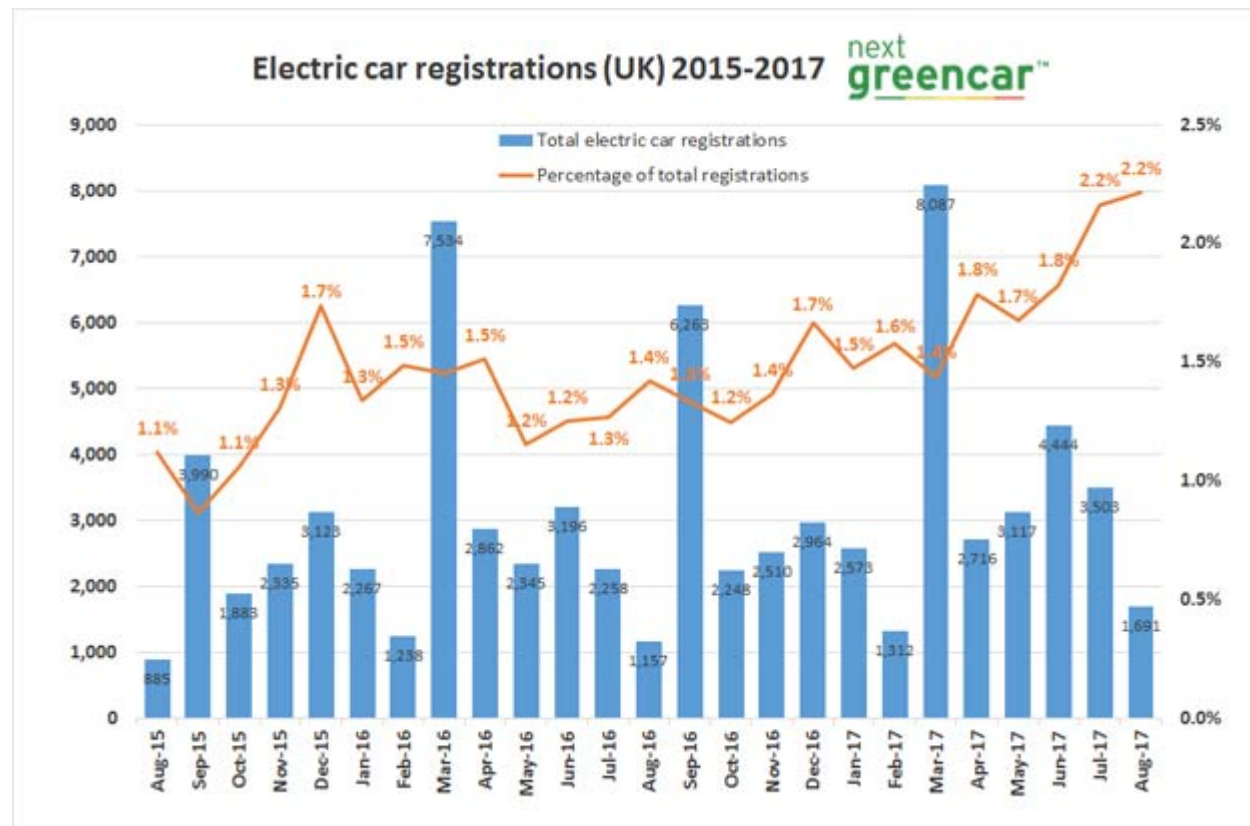


Global regulation is forcing manufacturers in one direction.





Domestic demand is a key component of UK strategy.





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Go Ultra Low – busting EV myths through a single voice.



The business case

- Favourable whole life costs
- Exempt from vehicle excise duty
- Tax savings
- Eligible for 100% first-year capital allowances
- Reduced fuel costs

Go Ultra Low logo

OVER 96% OF MOTORWAY SERVICES NOW HAVE RAPID CHARGERS.
YES, A SHAMELESS PLUG FOR ELECTRIC CARS.

Services

Go Ultra Low logo

Find out more at goultralow.com



Go Ultra Low Cities – shining lights in UK EV uptake.

Bristol is a Go Ultra Low City

Opening **3 High Occupancy Vehicle lanes** to ULEVs

4 rapid charging hubs in key locations with up to **30** chargers

Proposals for a **Clean Air Zone**



London is a Go Ultra Low City

New **chargepoint delivery** partnership providing single port of call

8 'Neighbourhoods of the Future' to normalise ULEVs

Car Club strategy to have **1m** members by 2025



Milton Keynes is a Go Ultra Low City

Opening **20k** parking bays for free to all ULEVs

Use of **all** bus lanes – same priority at lights as buses

EV Experience Centre in city centre



Nottingham is a Go Ultra Low City

ULEVs can use **13.6 miles** of bus lanes in low emission corridor through city centre

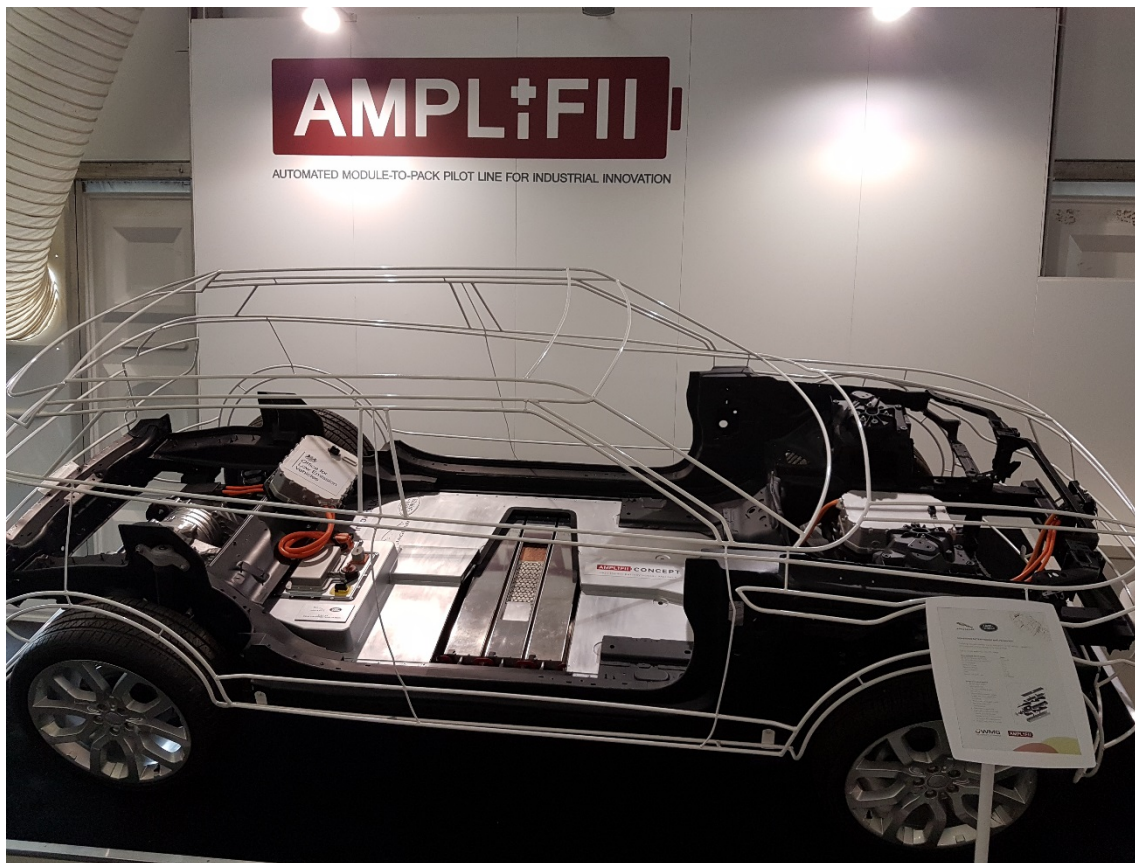
Up to **195** new public fast chargers

ULEV Business support package including **'try before you buy'** option





Supporting vehicle uptake, use and growing UK industry.





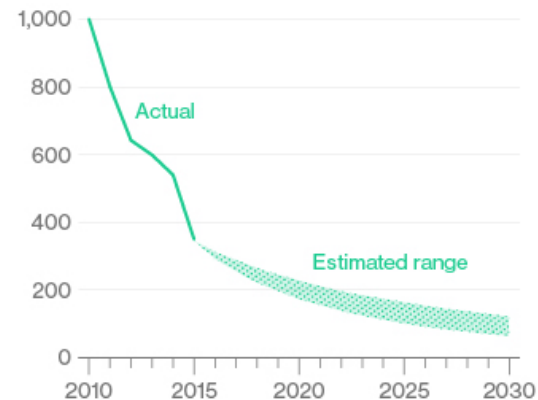
Between now and the mid-2020s battery costs will halve ...

It's All About the Batteries

Batteries make up a third of the cost of an electric vehicle.
As battery costs continue to fall, demand for EVs will rise.

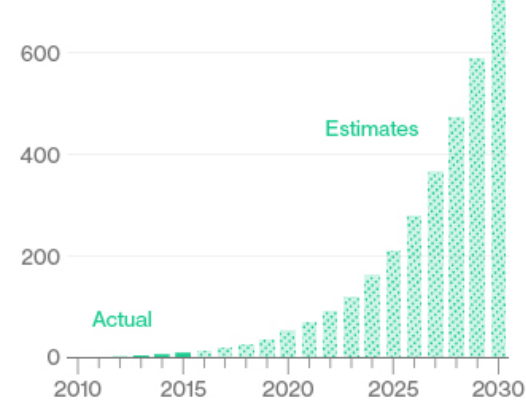
Cost for lithium-ion battery packs

\$1,200 per kilowatt hour



Yearly demand for EV battery power

800 gigawatt hours



Source: Data compiled by Bloomberg New Energy Finance





Industry responding to threat from new entrants (and cities).



By 2022 – 12 new battery electric (out of a total of 40 models); 600km NEDC vehicle range; 230km in 15min charging vs 90km in 15 mins today.



By 2025 – 1 in 4 cars will be a battery electric;
By 2030 – every model electrified.



By 2025 – 12 new battery electric models / 25 electrified vehicles.
By 2025 – all electric vehicles with a range of 400+ miles



By 2020 – every vehicle electrified.



By 2020 – all vehicle models electrified.



DAIMLER

By 2022 – all vehicle models electrified.



EVs need new infrastructure. And it is being installed.



ZAP STATS – 2 OCTOBER 2017

13871
CONNECTORS

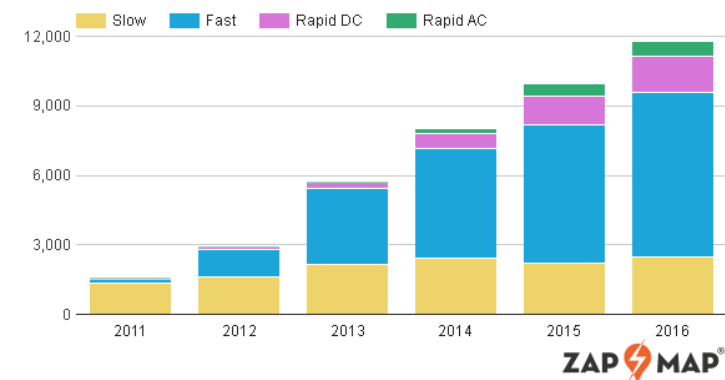
7476
DEVICES

4849
LOCATIONS

313
LAST 30 DAYS

ZAP MAP

CHARGING CONNECTORS BY TYPE: ZAP-MAP, 2011-2016





EV public network will be used differently to petrol stations.

Residential off-street



Residential on-street



Workplace



ALL
important
for current
EV drivers.

Visibility
important
for future
EV drivers.

‘Destination’



Train Stations



Rapids





£1bn+ 2015-2020 ULEV PROGRAMME

Research & Development (£££m+)

Plug-in Car Grants (£££m+)

Domestic Chargepoints (££m)

Go Ultra Low campaign (£m)

Plug-in Van/Truck Grants (££m)

Workplace Chargepoints (££m)

Go Ultra Low Cities (££m)

Plug-in Motorcycle Grants (£m)

Highways England Rapids (££m)

Zero / Low Emission Buses (£££m)

Plug-in Taxi Grants (££m)

Taxi Infrastructure Grants (££m)

London (£m)

Hydrogen FCEV Grants (£m)

Hydrogen Stations (££m)

Public Sector Fleet support (£m)

2020

3-7% new cars
ULEVs

2040

100% new cars ZEVs

2050

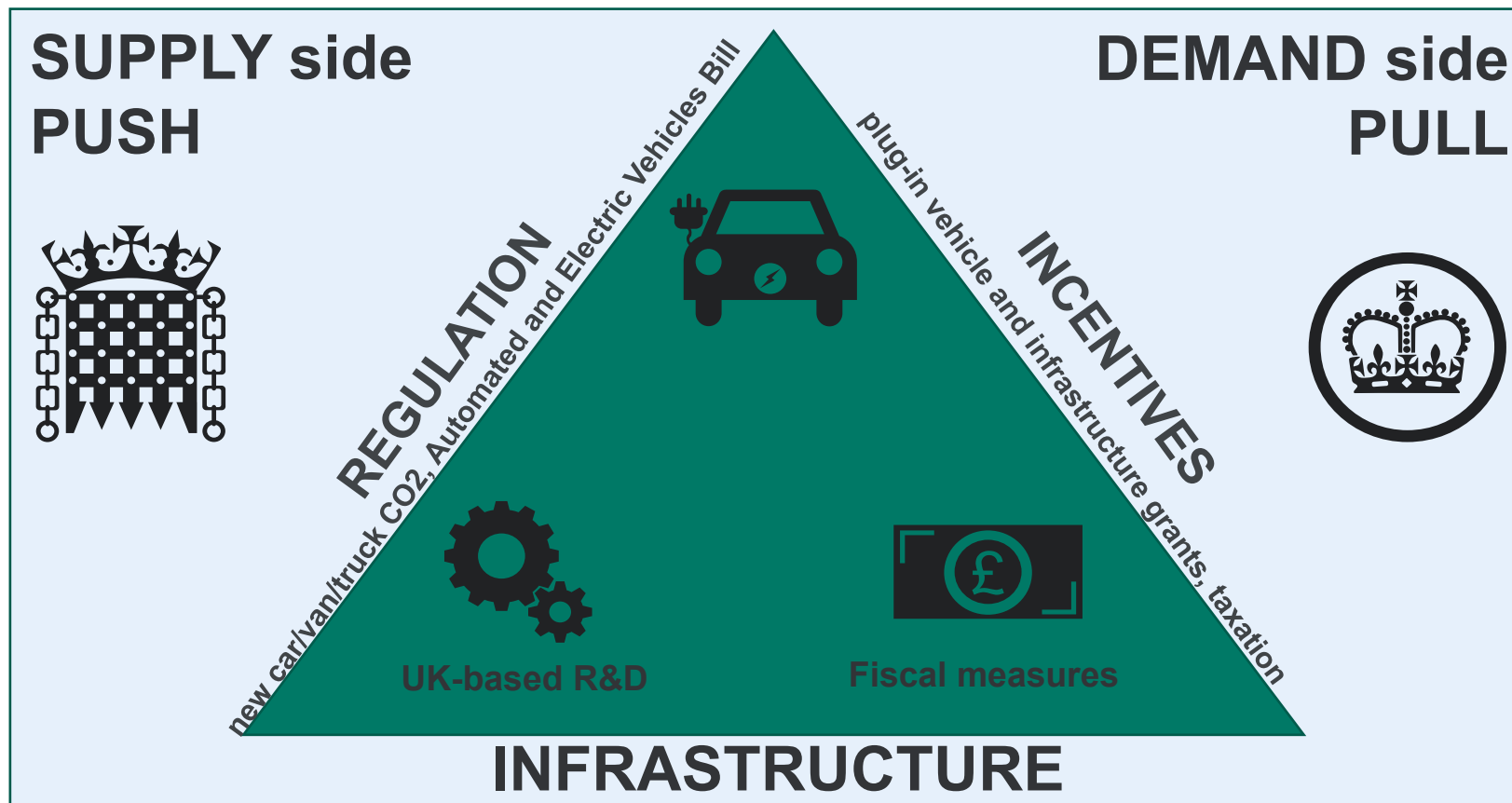
Nearly all cars ZEVs

£££m+
Fiscal
Incentives
(HMT)

+ £500m
Advanced
Propulsion
Centre (BEIS)



Creating growth, making transport cleaner and reducing CO₂.





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Thank you.

@OLEVgovuk

@GoUltraLow

